UNCLASSIFIED

Information Science and Technology Seminar Speaker Series

Ethan A. Rossi
University of Rochester

High Resolution Retinal Imaging with Adaptive Optics: Clinical Applications and New Technologies for the Study of Visual Function

Wednesday, December 11, 2013

3:00 - 4:00 PM

TA-3, Bldg. 1690, Room 102 (CNLS Conference Room)

Abstract: High resolution retinal imaging with adaptive optics is a powerful tool for the study of retinal disease and for examining visual function in both normal and diseased eyes. In this talk I will give an overview of the principles of adaptive optics retinal imaging, show several examples of retinal imaging applied to human disease and introduce a novel adaptive optics imaging system. This new device has several capabilities that make it ideal for both clinical and basic science applications. It will reduce clinical imaging time, permit sophisticated data acquisition schemes and improve the efficiency of imaging protocols that must be kept short for light safety purposes, such as fluorescence imaging. It also has great promise for novel scientific studies such as dissecting the role of the various classes of eye movements on visual function.

Biography: Ethan A. Rossi received his PhD from the University of California, Berkeley in 2009. His dissertation work, performed in the laboratory of Austin Roorda, focused on the limits of human visual resolution. Dr. Rossi was a postdoctoral fellow from 2010-2012 in the laboratory of David Williams at the Center for Visual Science at the University of Rochester. His postdoctoral research focused on tracking disease progression in age related macular degeneration using adaptive optics (AO) imaging methods. Dr. Rossi's ostdoctoralp work was supported through a postdoctoral award from Fight for Sight and a National Research Service Award from the National Eye Institute. For the past year, Dr. Rossi has been a Research Associate in the Center for Visual Science. During that time he has been engaged in several research projects, including clinical research on retinal disease, improving AO fluorescence imaging methods, automating retinal image analysis, and developing new instruments to study retinal structure and visual function.

For more information contact the technical host Jennie Disterhaupt, jlschei@lanl.gov, 667-8826.

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